

**REMARKS**

Claims 1-17, 23-25, and 27 are pending in this application. By this amendment, claim 1 is amended. No new matter is added. Claim 1 is the sole independent claim.

Applicants appreciate the courtesies extended by Examiner Ni to Applicants' representative during the November 23, 2004 personal interview.

**Allowable Subject Matter**

Applicants appreciate the Examiner's indication that claims 9, 13, 14, and 27 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims. However, Applicants respectfully submit that claims 1-8, 10-12, 15-17, and 23-25 are also allowable in view of the forgoing amendments and following remarks.

**Claim Rejection - 35 U.S.C. § 102**

Claims 1-3, 6-8, 23 and 24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Grumazescu, (U.S. Patent 5,809,157). The rejection is respectfully traversed.

Grumazescu fails to disclose or suggest a movable diaphragm having a soft magnetic material which forms part of a magnetic flux path of the actuator (emphasis added), as recited in claim 1.

The Examiner alleges on page 2, item 3 in the Office Action that mobile unit 33 and diaphragm 45 of Grumazescu represent Applicants' "diaphragm". However, it is submitted that elements 33 and 45 of Grumazescu cannot be anticipated as a diaphragm because it does not include a soft magnetic material. A soft magnetic material may be defined as having high

relative permeability ( $\mu=B/H$ ), for example (*see website pages: [www.key-to-steel.com](http://www.key-to-steel.com) and [www.britannica.com](http://www.britannica.com), describing soft magnetic material*).

Instead, Grumazescu discloses that elements 42, 43 and 44 are made of a diamagnetic material (col. 6, lines 11-18). As defined in McGraw-Hill Dictionary of Scientific and Technical Terms (6<sup>th</sup> Ed.), a diamagnetic material has a magnetic permeability less than 1; and materials with this property are repelled by a magnet and tend to position themselves at right angles to magnetic lines of force. Hence, as elements 42, 43 and 44 have a relative permeability of less than 1, it cannot constitute having a soft magnetic material which requires a high relative permeability.

With respect to the diaphragm 45, Grumazescu does not disclose the material of the diaphragm 45. Accordingly, Grumazescu does not disclose a soft magnetic material diaphragm. Further, Grumazescu teaches that the diaphragm 45 is similar to rod 24 (col. 6, lines 18-26). Rod 24 of Grumazescu is taught as being made of diamagnetic materials (col. 4, lines 9-11). Therefore, we may infer diaphragm 45 is made of diamagnetic material, and therefore, the diaphragm 45 cannot be made of a soft magnetic material.

Further, even if the Examiner were to allege that the mobile permanent magnet 41 (mobile unit 33) of Grumazescu forms part of the effective diaphragm of the loudspeaker, the permanent magnet 41 is a separate and distinct component with respect to the diaphragm 45 (e.g., col. 6, lines 11-12 describes mobile magnet 41 fastened to diaphragm 45), and thus cannot constitute the diaphragm.

For argument sake, even if it is assumed that magnet 41 can be considered part of a diaphragm, (an argument with which Applicants do not agree), Grumazescu discloses that the magnet 41 is made of a hard ferromagnetic material, which is again not a soft magnetic material.

Finally, the diaphragm of Grumazescu is part of a magnetic flux path of the actuator, as recited in claim 1. As a result, Grumazescu fails to disclose or suggest a movable diaphragm having a soft magnetic material which forms part of a magnetic flux path of the actuator, as recited in claim 1.

Because Grumazescu fails to disclose each and every feature of independent claim 1, Grumazescu cannot provide the claimed invention, it cannot provide a basis for a rejection under 35 U.S.C. §102. Reconsideration and withdrawal of the rejection are respectfully requested.

### **Claim Rejection - 35 U.S.C. § 103**

Claims 4-5, 10-12, 15-17 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Grumazescu. The rejection is respectfully traversed.

As discussed above, Grumazescu fails to disclose or suggest the claimed invention found in claim 1, the independent claim from which the rejected claims depend from, and thus fails to overcome the noted deficiencies of Grumazescu.

Further, one of ordinary skill in the art would not have been motivated to modify the disclosure of Grumazescu with any expectations of success as Grumazescu discloses that the mobile element (diaphragm) cannot be made of ferromagnetic materials (col. 1, lines 40-50). Accordingly, if the alleged modification of the prior art would change the principle of operation of the prior art invention, then the teachings of the reference is not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Absent such a *prima facie* case of evidence, one of ordinary skilled in the art would not have modified Grumazescu. Further, nowhere in Grumazescu is there any motivation to modify the disclosure in the manner asserted by

the Examiner. In the absence of any motivation to do so, one of ordinary skill in the art would not have modified the reference as asserted in the Office Action to obtain the claimed invention.

For at least these reasons, Gumazescu fails to disclose or render obvious the features recited in independent claim 1. Claims 2-7, 23-25 and 27, which depend from independent claim 1 are likewise distinguishable over the applied art for at least the reasons discussed, and for the additional they recite. Reconsideration and withdrawal of the rejection is respectfully requested.

### CONCLUSION

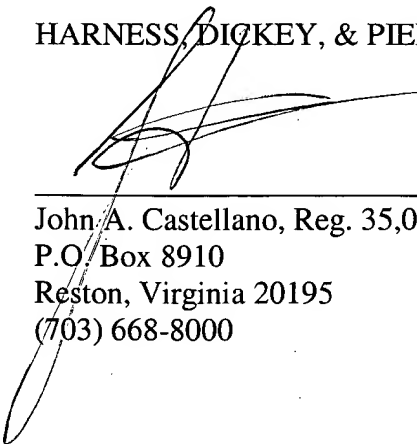
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned below at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.14; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By



---

John A. Castellano, Reg. 35,094  
P.O. Box 8910  
Reston, Virginia 20195  
(703) 668-8000

JAC/DJC/krf